ABSTRACT OF THE DISCLOSURE

A catalyst for oxidation reactions, particularly the oxidation of ammonia comprises oxides of (a) at least one element A selected from rare earths and yttrium, and (b) cobalt and element A being in such proportions that the element A to cobalt atomic ratio is in the range 0.8 to 1.2, at least some of said cobalt and element A oxides being present as a mixed oxide phase with less than 25% of the cobalt (by atoms) being present as free cobalt oxides, is disclosed. The catalyst may be supported on a secondary support in the form of an alkali-free alumina or lanthana wash coat on a primary support in the form of a mesh, gauze, pad, or monolith formed from a high temperature iron/aluminium alloy or a mesh, gauze, pad, monolith, or foam of a ceramic material.